WEST Search History

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DATE: Tuesday, May 25, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB;	PLUR=YES; OP=ADJ	
	L6	US-20020088138-A1.did.	1
	DB=PGPB,	USPT,EPAB,JPAB,DWPI,TDBD; PLUR=	YES; OP=ADJ
	L5	L4 and developer	4
	L4	L3 and (sucking air)	34
	L3	L2 and (blowing air)	1255
	L2	L1 and cleaning	160658
\Box	L1	container or vessel or tank	2131183

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 4 of 4 returned.

1. Document ID: US 20020088138 A1

L5: Entry 1 of 4 File: PGPB Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020088138

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020088138 A1

TITLE: Cleaning and remanufacturing methods for developing container

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Murakami, Katsuya Toride-shi JP

Nagatsuma, Mamoru Kitasohma-gun JP Suzuki, Teruo Mitsukaidoh-shi JP Nishimura, Kouzou Toride-shi JP

US-CL-CURRENT: 34/437; 34/380, 34/487

ABSTRACT:

A <u>cleaning</u> method for <u>cleaning a developer container</u> includes a step of <u>blowing air</u> through an opening formed in the <u>developer container</u> at a first flow rate; a step of <u>sucking air</u> through the opening at a second flow rate which is larger than the first flow rate; wherein while the blowing and suction steps are being simultaneously carried out, ambient air is permitted to enter the <u>developer container</u> through an ambient air inlet.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWRC | Draw De

2. Document ID: US 6278853 B1

L5: Entry 2 of 4 File: USPT Aug 21, 2001

US-PAT-NO: 6278853

DOCUMENT-IDENTIFIER: US 6278853 B1

** See image for Certificate of Correction **

TITLE: Recycling method of toner container

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Record List Display 1 486 2 01 7

DATE-ISSUED: August 21, 2001

INVENTOR-INFORMATION:

CITY STATE ZIP CODE COUNTRY NAME JΡ Ban; Yutaka Tokyo Yokohama JΡ Murakami; Katsuya Tazawa; Fumio Numazu JP

US-CL-CURRENT: 399/109; 399/257

ABSTRACT:

A recycling method for a toner supply container that is detachably mountable to a main assembly of an image forming apparatus to supply toner into the main assembly, includes the steps of providing a toner supply container including a filling opening for filling the toner, a supply opening for supplying the toner, a first seal member for sealing the filling opening, and a second seal member for sealing the supply opening; a first step of dismounting the first and second seal members from the toner supply container; a second step, after the first step, of cleaning an inside of the toner supply container by blowing air into the toner supply container through either one of the filling opening and the supply opening, and simultaneously sucking the air through the other one of the openings; a third step, after the second step, of filling the toner through the filling opening.

30 Claims, 34 Drawing figures Exemplary Claim Number: 1 Number of Drawing Sheets: 30

3. Document ID: US 5793400 A

L5: Entry 3 of 4

File: USPT

Aug 11, 1998

US-PAT-NO: 5793400

DOCUMENT-IDENTIFIER: US 5793400 A

TITLE: Image recording apparatus by a wet type electro-photographic method and excess liquid developer removing device used in the apparatus

DATE-ISSUED: August 11, 1998

INVENTOR-INFORMATION:

STATE ZIP CODE CITY COUNTRY NAME Mukoyama; Tatsuya Yokosuka Ono; Tsuyoshi Machida J.T.P. Okabe; Masahiko Yamato JΡ Horiuchi; Ryuji Yokohama JP Nakagami; Hiroki Yokosuka JР

US-CL-CURRENT: 347/140; 399/249

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ABSTRACT:

The present invention provides an image recording apparatus and an excess liquid developer removing device used in the apparatus. In the image recording apparatus, the recording medium wound around the rotary drum is developed by liquid developer supplied from a developing device. A dish provided on the developing device is displaced in the vicinity of the recording medium wound around the rotary drum by being declined in a predetermined angle to prevent the bubbles from generating. The excess liquid developer attached on the recording medium is removed by the air from a nozzle of a blower. The nozzle is displaced by a nozzle displacing device in the vicinity of a developing electrode for supplying the liquid developer only in the midst of developing to prevent the nozzle from being chocked up with toner contained in the liquid developer. Further, the excess liquid developer collected to an end of the recording medium by the air are removed by a part of the excess liquid developer absorbing member caused by the contact therewith.

14 Claims, 28 Drawing figures Exemplary Claim Number: 1 Number of Drawing Sheets: 14

Full | Title | Citation | Front | Review | Classification | Date | Reference | Classification | Classification | Date |

4. Document ID: JP 2002207365 A, US 20020088138 A1

L5: Entry 4 of 4

File: DWP

Jul 26, 2002

DERWENT-ACC-NO: 2002-681657

DERWENT-WEEK: 200273

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TITLE: <u>Cleaning</u> method for <u>developer container</u>, involves simultaneously performing blowing and suction steps such that ambient air is permitted to enter the <u>developer container</u> through ambient air inlet

INVENTOR: MURAKAMI, K; NAGATSUMA, M; NISHIMURA, K; SUZUKI, T

PRIORITY-DATA: 2001JP-0001466 (January 9, 2001)

PATENT-FAMILY:

 PUB-NO
 PUB-DATE
 LANGUAGE
 PAGES
 MAIN-IPC

 JP 2002207365 A
 July 26, 2002
 022
 G03G015/08

 US 20020088138 A1
 July 11, 2002
 040
 F26B003/00

INT-CL (IPC): <u>B08</u> <u>B</u> <u>5/02</u>; <u>B08</u> <u>B</u> <u>5/04</u>; <u>B65</u> <u>D</u> <u>83/04</u>; <u>B65</u> <u>D</u> <u>83/06</u>; <u>F26</u> <u>B</u> <u>3/00</u>; <u>F26</u> <u>B</u> <u>7/00</u>; <u>G03</u> <u>G</u> 15/08

ABSTRACTED-PUB-NO: US20020088138A

BASIC-ABSTRACT:

NOVELTY - The method involves <u>blowing air</u> through an opening formed in a <u>developer container</u> at a first flow rate, and <u>sucking air</u> through the opening at a second flow rate which is larger than the first flow rate. The blowing and suction steps are simultaneously performed such that ambient air is permitted to enter the <u>developer container</u> through an ambient air inlet.

age + or

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recycling method for <u>developer container</u>.

USE - For cleaning developer container.

ADVANTAGE - Ensures efficient removing of foreign substances e.g. unwanted developer in a developer supply container, without deforming the developer supply container during cleaning.

DESCRIPTION OF DRAWING(S) - The figure shows the vertical sectional view of the electrophotographic copier, into which a toner supply $\underline{\text{container}}$ is mounted.

Title Citation Front Review Classification Date Reference	Claims Kwic
ar Generate Collection Print Fwd Refe Bkwd Refs	Generate O/
Term	Documents
DEVELOPER	148864
DEVELOPERS	37663
DE VEEOI ERS	
(4 AND DEVELOPER).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	4

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Search Results - Record(s) 31 through 34 of 34 returned.

31. Document ID: US 3868814 A

L4: Entry 31 of 34 File: USPT Mar 4, 1975

US-PAT-NO: 3868814

DOCUMENT-IDENTIFIER: US 3868814 A

TITLE: SPINNING FRAME HAVING TWO CONFRONTINGLY MOUNTED RING ROWS

DATE-ISSUED: March 4, 1975

INVENTOR-INFORMATION:

NAME

STATE ZIP CODE COUNTRY CITY

Chiari; Natale Colgone Bresciano

US-CL-CURRENT: 57/305

ABSTRACT:

A spinning frame is disclosed of the kind having two confrontingly mounted spindle rows and three movable bars for each of said rows, which are adapted, respectively, to support the slider-carrying rings, the antiballooning containers and the thread guides, the improvement consisting in that the three movable bars enumerated above, relative to one of said rows, are made mechanically independent of the three bars relative to the other row. Thus the space comprised between the two fronts of the machine becomes freely available and is permitted to house ancilliary apparatus such as cleaning devices.

4 Claims, 5 Drawing figures Exemplary Claim Number: 1 Number of Drawing Sheets: 5

Full Title Citation Front Review Classification Date Reference

32. Document ID: US 3807599 A

L4: Entry 32 of 34 File: USPT Apr 30, 1974

US-PAT-NO: 3807599

DOCUMENT-IDENTIFIER: US 3807599 A

TITLE: FUEL ELEMENT STORAGE TANK FOR NUCLEAR POWER PLANTS

eb bcgbcc h

Record List Display

DATE-ISSUED: April 30, 1974

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Schettler; Kurt Erlangen DT
Kuster; Hermann Erlangen DT

US-CL-CURRENT: 376/272; 220/694, 250/428, 250/505.1, 976/DIG.272

ABSTRACT:

To avoid the escape of radioactive aerosols from the water surface of a fuel element storage $\underline{\operatorname{tank}}_{\ell}$ a continuous overflow of the water is maintained together with an air curtain disposed closely above the water surface.

9 Claims, 2 Drawing figures Number of Drawing Sheets: 1

	Full	Title	Citation	Frent	Review	Classification	Date	Reference		Claims	KWIC	Draw De
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33. Document ID: JP 2000313500 A

L4: Entry 33 of 34 File: JPAB Nov 14, 2000

PUB-NO: JP02000313500A

DOCUMENT-IDENTIFIER: JP 2000313500 A TITLE: CONTAINER CLEANING APPARATUS

PUBN-DATE: November 14, 2000

INVENTOR-INFORMATION:

NAME COUNTRY

ASADA, KOJI

INT-CL (IPC): B67 C 7/00

ABSTRACT:

PROBLEM TO BE SOLVED: To make <u>cleaning of a container</u> under erected condition and <u>cleaning</u> thereof under inverted condition by one process possible and to attempt to miniaturize an apparatus and to reduce the space for installation by providing an air blowing device for <u>blowing air to a container</u> to be cleaned and an air suction device for <u>sucking air</u> blown to the <u>container</u> to be cleaned.

SOLUTION: A <u>container</u> A carried by means of a <u>container</u> carrying conveyor 9 is stopped by means of a stopper 4 and when it reaches a <u>container</u> picking-up position, the <u>container</u> A is held by a hand 2. Then, the <u>container</u> A being held by the hand 2 is inverted along a cam rail 7A of a cam plate 7 in an inverting mechanism by rocking of an arm 3 and is carried to a placing position. During this period, the <u>container</u> A is inverted from an erected condition to an inverted condition and furthermore, to the erected condition, and during the process, <u>cleaning in the container</u> A is performed with air blown from an air blowing nozzle provided in the hand 2 and successively, the air in the <u>container</u> A is evacuated by suction through a vacuum hose passed through the hand 1.

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34. Document ID: JP 2002207365 A, US 20020088138 A1

L4: Entry 34 of 34 File: DWPI Jul 26, 2002

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sales | Claims | KWAC | Disva De

DERWENT-ACC-NO: 2002-681657

DERWENT-WEEK: 200273

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TITLE: <u>Cleaning</u> method for developer <u>container</u>, involves simultaneously performing blowing and suction steps such that ambient air is permitted to enter the developer container through ambient air inlet

INVENTOR: MURAKAMI, K; NAGATSUMA, M; NISHIMURA, K; SUZUKI, T

PRIORITY-DATA: 2001JP-0001466 (January 9, 2001)

PATENT-FAMILY:

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 022
 G03G015/08

 US 20020088138 A1
 July 11, 2002
 040
 F26B003/00

INT-CL (IPC): <u>B08 B 5/02; B08 B 5/04; B65 D 83/04; B65 D 83/06; F26 B 3/00; F26 B</u> 7/00; G03 G 15/08

ABSTRACTED-PUB-NO: US20020088138A

BASIC-ABSTRACT:

NOVELTY - The method involves <u>blowing air</u> through an opening formed in a developer <u>container</u> at a first flow rate, and <u>sucking air</u> through the opening at a second flow rate which is larger than the first flow rate. The blowing and suction steps are simultaneously performed such that ambient air is permitted to enter the developer container through an ambient air inlet.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recycling method for developer $\underline{container}$.

USE - For cleaning developer container.

ADVANTAGE - Ensures efficient removing of foreign substances e.g. unwanted developer in a developer supply container, without deforming the developer supply container during cleaning.

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Term	Documents
SUCKING	68083
SUCKINGS	5
AIR	2502395
AIRS	1635
(3 AND (SUCKING ADJ AIR)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	34
(L3 AND (SUCKING	34

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